

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
15 July 2004 (15.07.2004)

PCT

(10) International Publication Number
WO 2004/059974 A1

(51) International Patent Classification⁷: **H04N 7/06**

(21) International Application Number:
PCT/KR2003/002215

(22) International Filing Date: 21 October 2003 (21.10.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
10-2002-0084462
26 December 2002 (26.12.2002) KR

(71) Applicant (for all designated States except US): **ELECTRONICS AND TELECOMMUNICATIONS RESEARCH INSTITUTE [KR/KR]**; 161, Gajeong-dong, Yuseong-gu, Daejeon 305-350 (KR).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CHO, Sammo [KR/KR]**; #106-1105, HANMAEUL APT., SONGGANG-DONG, YUSEONG-GU, DAEJON 305-756 (KR).
LEE, Hyun [KR/KR]; #2-303, GARAM VILLA, 149-13,

SINSEONG-DONG, YUSEONG-GU, DAEJON 305-345 (KR). **LEE, Soo In [KR/KR]**; #401-701, SEONBIMAEUL APT., SONGCHON-DONG, DAEDEOK-GU, DAEJON 306-778 (KR). **Ahn, Chieteuk [KR/KR]**; #208-603, EXPO APT., JEONMIN-DONG, YUSEONG-GU, DAEJON 305-761 (KR).

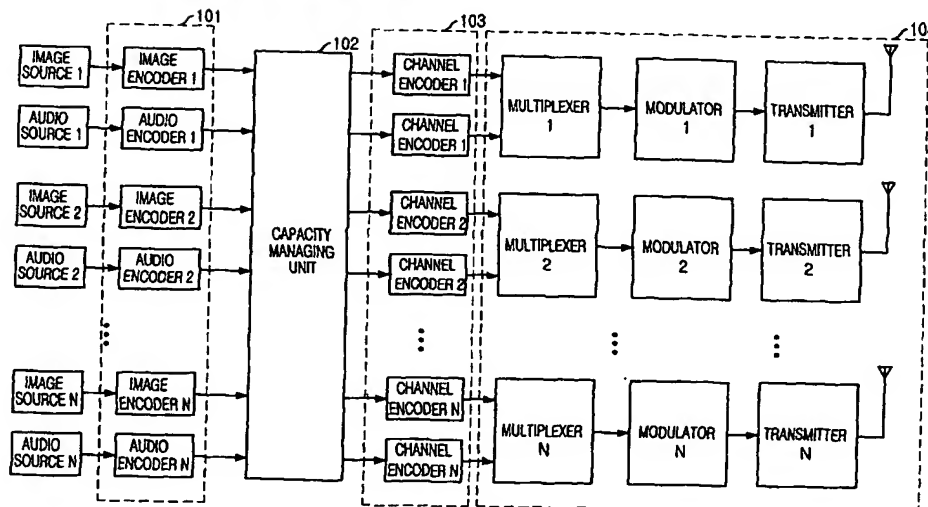
(74) Agent: **SHINSUNG PATENT FIRM**; Haecheon Bldg., 741-40, Yeoksam 1-dong, Kangnam-gu, Seoul 135-924 (KR).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,

[Continued on next page]

(54) Title: APPARATUS AND METHOD FOR PROVIDING DIGITAL BROADCASTING SERVICE BASED ON MULTIPLE BROADCASTING SITES AND FREQUENCY BANDS



(57) Abstract: An apparatus for transmitting data in a digital broadcasting system is disclosed. The apparatus includes: a source encoding unit for encoding data to be transmitted and generating source-coded data; a capacity managing unit for dividing the source-coded data into divided data for a plurality of channels in case that an available data capacity for transmitting the source-coded data does not exist in one channel but sum of available data capacities of the multiple channels can accommodate the source-coded data, and adding header information to the divided data; a channel encoding unit for encoding the divided data according to channel environment and generating channel-coded data; and a transmitting unit for multiplexing, modulating and transmitting the channel-coded data through multiple frequency bands and multiple broadcasting sites.



SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*